

REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed August 25, 2004. Claims 1-3, 6-20, 22-29, 33, 37-39, 41-43, and 47 are pending in the present application and stand rejected. For at least the reasons discussed below, Applicants respectfully request reconsideration and favorable action in this case.

Claim Objections

The Examiner rejects Claims 2, 3, and 6-13 as including informalities. Applicants have amended Claims 2, 3, and 6-13 pursuant to the Examiner's suggestion. Therefore, Applicants respectfully request that the objection to Claims 2, 3, and 6-13 be withdrawn.

Rejections Under §101

The Examiner rejects Claims 1-3 and 6-13 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Although the Examiner does not mention Claims 25-28, Applicants assume these claims are similarly rejected on these grounds.

The M.P.E.P states that "a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature." See M.P.E.P § 2106; *O'Reilly v. Morse*, 56 U.S. 62, 112-14 (1853); *In re Brilow*, 616 F.2d 516, 519-21 (CCPA 1980). Moreover, the USPTO *Training Materials* for the *Examination Guidelines for Computer-Related Inventions* specifically include a propagated signal claim in the form of a "computer data signal embodied in a carrier wave." See *Training Materials* for the *Computer-Related Inventions Guidelines*, Tab 11, "Compression/Encryption Examples," Claim 13. The example claim recites:

- A computer data signal embodied in a carrier wave comprising:
- a. a compression source code segment comprising ... [recites self-documenting source code]; and
 - b. an encryption source code segment comprising ... [recites self-documenting source code].

See *id.* In concluding that the claim is a statutory, the *Training Materials* note that the claim elements are "embodied on a computer-readable medium – the carrier wave." See *id.* at "Claim Analysis," page 4.

To advance the prosecution of this case, Applicants have amended the preamble of Claim 1 to recite "A data signal embodied in a carrier wave, the data signal comprising:". Therefore, for at least the reasons discussed above, Claims 1-3, 6-13 and 25-28 are directed to statutory subject matter. Applicants thus respectfully request that the rejection of Claims 1-3 and 6-13 (and Claims 25-28) be withdrawn.

Double Patenting Rejections

The Examiner rejects Claims 1-3, 6-7, 11-15, 17-20, 22, 24-26, 29, 37-39, 41, and 43 under the doctrine of obviousness-type double patenting based on Claims 1-9 of Manchester, et al., U.S. Patent 6,628,657 B1 (hereafter "*Manchester*"). Although Applicants do not necessarily agree with or acquiesce to the Examiner's statements regarding the claims of the Application or their purported relationship to the claims of *Manchester*, Applicants stand ready to execute a terminal disclaimer with respect to *Manchester* if the Examiner finds that Claims 1-3, 6-7, 11-15, 17-20, 22, 24-26, 29, 37-39, 41, and 43 are otherwise allowable.

Rejections Under §102

The Examiner rejects Claims 1-3, 6, 11-15, 17-20, 22, 24-26, 29, 37-39, 41, and 43 under 35 U.S.C. §102(e) as being anticipated by Appanna, et al., U.S. Patent 6,647,021 B1 (hereafter "*Appanna*"). Applicants respectfully traverse these rejections and all assertions therein.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. § 2131. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990); M.P.E.P. § 2131 (*emphasis added*).

Independent Claim 1 recites, "a first plurality of service channels in at least one frame each transporting traffic for a DS-0 connection, every service channel in the first plurality of service channels comprising a current channel associated signaling (CAS) value for the DS-0

connection." Applicants submit that *Appanna* fails to disclose that *every* service channel in the first plurality of service channel transporting DS-0 traffic includes a CAS value.

In response to the Applicants' previous arguments, the Examiner takes issue (on page 16 of the Final Office Action) with the Applicants' argument that *Appanna* fails to disclose that "every offered time slot transporting DS-0 traffic includes a CAS value." First, the Examiner states that the claim does not mention anything about time slots. The Examiner is correct. The Applicants were referring to the time slots of *Appanna*, which the Examiner equates with the recited service channels (for example, see Final Office Action, p. 4, paragraph 8). The Applicants were simply stating that the time slots described in that reference do not include both DS-0 traffic and a CAS value. Next, the Examiner states that the claims do not recite that any time slots *include* the signaling value itself. However, if the recited service channels are time slots (as argued by the Examiner), Claim 1 recites "service channels . . . each transporting traffic for a DS-0 connection, every service channel . . . *comprising*¹ a current channel associated signaling (CAS) value for the DS-0 connection" (emphasis added). Therefore, each service channel comprises a CAS value. Since Claim 1 uses both the terms "service channel" and "DS-0 connection," they are clearly different concepts. And if, as stated by the Examiner, the recited service channels equate to the time slots of *Appanna*, there is clearly no disclosure in *Appanna* that the time slots transporting DS-0 traffic also each comprise/include a CAS value. Furthermore, even if *Appanna* does disclose that each DS-0 connection comprises signaling values (as stated by the Examiner), this is *not* a disclosure that each *service channel* comprises a CAS value

The Examiner goes on to argue that the claim language "a first plurality of service channels in at least one frame" implies that the plurality of service channels may span more than one frame. This is *not* what is implied or meant by this claim. This language simply indicates that at least one of the frames of the signal (the signal comprises a frame repeating at a defined interval – in other words, it includes a number of frames) includes a plurality of service channels each transporting traffic for a DS-0 connection and that each service channel comprises a CAS value. More than one of the frames may include a plurality of service

¹ As stated in the M.P.E.P., "comprising" is synonymous with "including" (see M.P.E.P. § 2111.03).

channels that each transport traffic for a DS-0 connection and that each comprise a CAS value, but only one frame in the signal is required by the claim to have such service channels.

This does not imply that a service channel can span multiple frames or that the definition of a service channel can otherwise be manipulated as suggested by the Examiner in his comments. As required by the M.P.E.P., the Examiner may give a claim its broadest *reasonable* interpretation by giving claim terms their ordinary meaning to one of skill in the art unless the applicant has provided a clear definition in the specification. M.P.E.P. § 2111.01. However, the interpretation of "service channel" taken by the Examiner is unreasonable both because the Examiner has not provided any evidence that the term "service channel" has the meaning the Examiner ascribes to it in the Office Action and because the Applicants have clearly defined this term in the specification.

According to M.P.E.P. § 2111.01, "[t]he ordinary and customary meaning of a term may be evidenced by a variety of sources, [citation omitted], including: the claims themselves, [citation omitted], dictionaries and treatises, [citation omitted], and the written description, the drawings, and the prosecution history, [citation omitted]." The Examiner has provided no support in any of these sources for the Examiner's proposed interpretation of the term "service channel." However, the written description, the drawings, and the prosecution history (this argument) do provide a meaning for this term.

In association with Figure 4, the Application discloses and illustrates that a frame 100 (for example, a TSB frame) includes a number of service channels 120 (for example, TSB channels). Specifically, the Application describes the following:

The service traffic portion 104 of the TSB frame 100 is 500 bytes in length and includes 250 two-byte TSB channels, or other *service channels*, 120. As described in more detail below, each TSB channel 120 may transport traffic for a single DS-0 connection or may be used as part of a set of TSB channels to carry ISDN or ATM traffic.

(Col. 23, lines 16-21) (emphasis added). Therefore, through this description and the illustration in Figure 4, the Application clearly discloses what is mean by a "service channel." Furthermore, in association with Figure 5, the Application discloses how these service channels

are used to transport DS-0 traffic as recited in the claims. Specifically, the Application describes the following:

Referring to FIGURE 5, for voice traffic, each TSB channel 120 includes a data channel 130 and a signal channel 132. In the illustrated embodiment, the data and signal channels 130 and 132 are each one byte in size. The data channel 130 transports a DS-0 channel 134. The signal channel 132 transports in-band a current channel associate signaling (CAS) value 136 for the DS-0 channel 134 in the data channel 130.

...

By carrying the CAS value in-band with the associated DS-0 channel, the TSI 64 of the fused TDM/ATM switch card 60 can switch the CAS bits 136 together with the DS-0 traffic using a 2 byte wide switch memory and conventional switching techniques. This simplifies the design of the TSI 64 as it need not have exact knowledge of how the CAS bits 136 are spread over a superframe which requires digital logic to perform the necessary frame counts and comparisons.

(Page 24, lines 1-8 and 21-29). This passage makes it clear, as claimed, that service channels (for example, TSB channels) include both the DS-0 traffic and a CAS value.

In summary, *Appanna* fails to disclose that every service channel in a first plurality of service channels transporting DS-0 traffic includes a CAS value, as recited by Claim 1, when the term "service channel" is reasonably and properly interpreted according to its broadest reasonable meaning in light of the written description, the drawings, and the prosecution history, as well as given the absence of any evidence that the ordinary meaning of such term is different (although, even if such evidence of ordinary meaning existed, the Applicants clear definition of the term would trump this different ordinary meaning).

Accordingly, Applicants respectfully request reconsideration and allowance of Claim 1 and its dependent Claims 2-3, 6, 11-13. Claims 14, 25, 29, and 37 are allowable for reasons analogous to those discussed in connection with Claim 1 above. Claims 15, 17-20, 22, 24, 26, 38-39, 41, and 43 each depend from one of independent Claims 14, 25, 29, and 37 and thus are also patentable over the cited art for at least the reasons discussed above with regard to Claim 1.

Rejections Under §103

The Examiner rejects Claim 7 under 35 U.S.C. §103(a) as being unpatentable over *Appanna*. Also, the Examiner rejects Claims 8-10, 16, 23, 27, 28, 33, 42, and 47 under 35 U.S.C. §103(a) as being unpatentable over *Appanna* in view of Frey, et al., U.S. Patent 5,982,783 (hereafter "*Frey*"). Applicants traverse these rejections and all findings and assertions therein. In particular, these depend from one of independent Claims 1, 14, 25, 29 and 37. As discussed above, independent Claims 1, 14, 25, 29 and 37 are allowable over *Appanna*. The Office Action fails to cite any teaching or suggestion in *Frey* of the missing elements discussed above. Therefore, Claims 7, 8-10, 16, 23, 27, 28, 33, 42, and 47 are allowable at least because they depend from one of allowable Claims 1, 14, 25, 29 and 37. Thus, Applicants respectfully request that these rejections be withdrawn.

CONCLUSION

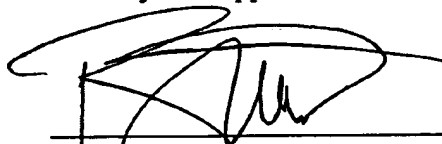
Applicants have made an earnest attempt to place this application in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this application in any manner, the Examiner is invited to contact Brian W. Oaks, Attorney for Applicants, at the Examiner's convenience at (214) 953-6986.

Although Applicants believe that no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts, L.L.P.

Respectfully submitted,

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